

Integrated LCD DVR Surveillance System

With Built-In 4 Channel Triplex Digital Video Recorder and 4 Weatherproof Night Vision Cameras

Instruction Manual

English Version 1.0



MODEL:
L15LD420 Series
L17LD420 Series



www.lorexcctv.com

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Thank you for purchasing the L15LD420 / L17LD420 Series Observation System. Lorex is committed to providing our customers with a high quality, reliable security product.

The L15LD420 / L17LD420 Series observation system is one of the most sophisticated video security systems on the market today with many of the same advanced features you will find in “high security” systems used in banks and casinos. Perfect for any upscale home or office, the L15LD420 / L17LD420 is a complete packaged system that includes everything you need; LCD Monitor with built-in Digital video recorder, cameras, brackets, cables and power supplies.

To learn more about this L15LD420 / L17LD420 Series Observation System and to learn about our complete range of accessory products, please visit our website at:

<http://www.lorexcctv.com>

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO A QUALIFIED SERVICE PERSONNEL		
	The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.	
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.	
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.		
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.		

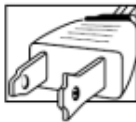
Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacture process of your video product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to assure your enjoyment and proper use of the video product and accessory equipment. Please read them carefully before operating and using your video product.

Installation

1. **Read and Follow Instructions** - All the safety and operating instructions should be read before the video product is operated. Follow all operating instructions.
2. **Retain Instructions** - The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** - Comply with all warnings on the video product and in the operating instructions.
4. **Polarization** - Do not defeat the safety purpose of the polarized or grounding-type plug.

A polarized plug has two blades with one wider than the other.



A grounding type plug has two blades and a third grounding prong.

The wide blade or the third prong are provided for your safety.



If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

5. **Power Sources** - This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your location, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Overloading** - Do not overload wall outlets of extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.
7. **Power-Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

8. **Ventilation** - Slots and openings in the case are provided for ventilation to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video equipment on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.

9. **Attachments** - Do not use attachments unless recommended by the video product manufacturer as they may cause a hazard.

10. **Water and Moisture** - Do not use this video product near water. For example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.

Caution: Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark of CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

11. **Accessories** - Do not place this video equipment on an unstable cart, stand, tripod, or table. The video equipment may fall, causing serious damage to the video product. Use this video product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the video product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.



Service

13. **Servicing** - Do not attempt to service this video equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
14. **Conditions Requiring Service** - Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
 - A. When the power supply cord or plug is damaged.
 - B. If liquid has been spilled or objects have fallen into the video product.
 - C. If the video product has been exposed to rain or water.
 - D. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
 - E. If the video product has been dropped or the cabinet has been damaged.
 - F. When the video product exhibits a distinct change in performance. This indicates a need for service.
15. **Replacement Parts** - When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the video product manufacturer can prevent fire, electric shock or other hazards.
16. **Safety Check** - Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.
17. **Wall or Ceiling Mounting** - The cameras provided with this system should be mounted to a wall or ceiling only as instructed in this guide, using the provided mounting brackets.
18. **Heat** - The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Use

19. **Cleaning** - Unplug the video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
20. **Product and Cart Combination** - Video and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the video product and car combination to overturn.
21. **Object and Liquid Entry** - Never push objects for any kind into this video product through openings as they may touch dangerous voltage points or "short-out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.
22. **Lightning** - For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power line surges.

NOTE

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows this manual's guidelines to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury.

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

FCC CLASS B NOTICE

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for assistance

General Precautions

1. All warnings and instructions of this manual should be followed
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water dampened cloth for cleaning
3. Do not use this unit in humid or wet places
4. Keep enough space around the unit for ventilation. Slots and openings in the storage cabinet should not be blocked
5. During lightning storms, or when the unit is not used for a long time, disconnect the power supply, antenna, and cables to protect the unit from electrical surge

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Feature List

Monitor

- 15" High Resolution LCD Monitor with built in DVR
- Mouse control interface (mouse included)
- Trilingual interface (English, Spanish and French)
- Supports DDNS (Dynamic Domain Name Server)
- Commercial grade monitor stand
- Wall or Rack mountable (mounts sold separately)
- A full range of LOREX Pro Series CCTV cameras available for use with this system

Built-In Digital Video Recorder (DVR)

- Triplex Technology allows for recording, playback or viewing simultaneously.
- Network Interface for remote viewing over the internet***
- H.264 video compression
- USB (Device) port for Firmware Upgrade, Backup and Image Transfer
- HDD cradle - easy to remove/upgrade/archive
- HDD Designed for Surveillance: Hard Drive is specifically designed for optimal performance in the commercial video security applications.

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Getting Started

The L15LD420 / L17LD420 Series comes with the following components:



**LCD & DVR SYSTEM
WITH PRE-INSTALLED HDD ***



**4 x CAMERAS
4 x METAL STANDS ***



1 x POWER ADAPTOR



**4 x 60 FT. (18M)
EXTENSION CABLES**



**4 in 1 Power Adaptor for Cameras
(Optional in certain models) ***



**1 x 10' ETHERNET
CABLE**



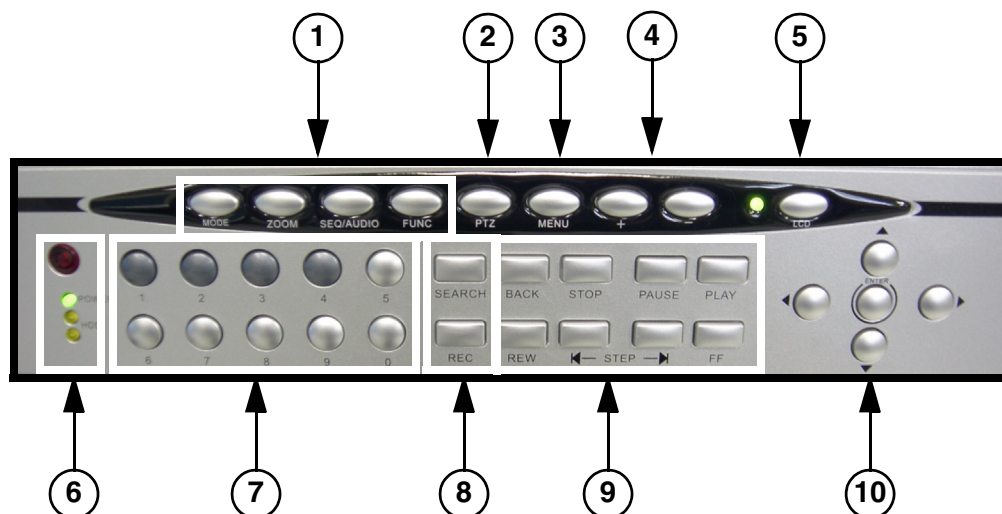
**1 x REMOTE CONTROL
2 x AA BATTERIES**



**1 x HARDWARE MANUAL
1 x SOFTWARE MANUAL
1 x QUICK START GUIDE
1 x SOFTWARE CD**

*** SCREEN SIZE, COLOR, HDD SIZE, CAMERA CONFIGURATION AND CAMERA POWER ADAPTORS
MAY VARY BY MODEL.
CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED THE COMPLETE
SYSTEM, INCLUDING ALL COMPONENTS SHOWN ABOVE.**

Front Panel



1. Display Control Buttons	2. PTZ	3. Menu Button	4. +/- Buttons
5. LCD Monitor Power Button	6. IR LED Indicators	7. 0~9 Buttons	8. Search & Record Buttons
9. Playback Controls	10. Navigation & Enter		

1. DISPLAY CONTROL BUTTONS - Control the onscreen display of Cameras:

- **MODE** - Displays the Split Mode Menu.
- **ZOOM** - Zooms in on the currently displayed camera (1x Zoom). Use the direction buttons or mouse and move to the area to be enlarged.
- **SEQ/AUDIO** - (SEQ) Displays cameras 1~4 in Full Screen Sequencing Mode. (AUDEIO) Mutes the Volume Output to the AUDIO OUTPUT Port.

Note: Hold the SEQ/AUDIO Button for 3 seconds to switch between SEQ and AUDIO.

- **FUNC** - Displays the Function Menu.

2. **P/T** - Enters PTZ (Pan / Tilt / Zoom) control mode. A PTZ type camera (not included) is required to use the PTZ Functions.

3. **MENU** - Enters the System Menu and Setup.

4. **+/- BUTTONS** - Adjusts the System Menu and Setup values.

5. **LCD MONITOR POWER BUTTON** - Turns the LCD Monitor Power ON/OFF.

NOTE: The system will continue to record when the LCD Monitor is powered off.

Front Panel

6. IR RECEIVER & LED INDICATORS:

- **IR RECEIVER** - Receiver for the Remote Controller signal.
- **DVR STATUS LEDs:**
 - **POWER** - Power LED indicator for the System power status (ON/OFF).
 - **HDD** - HDD access LED indicated when activity is taking place on the system Hard drive.

7. **0~9 BUTTONS** - Switches the full screen view between channels 1~4. Numbers 0~9 are used to enter the System Password.

8. SEARCH & REC BUTTONS:

- **SEARCH** - Enters search mode (search through previously recorded data). Search by percentage, date / time, or the event list.
- **REC** - Starts and stops recording from the cameras.

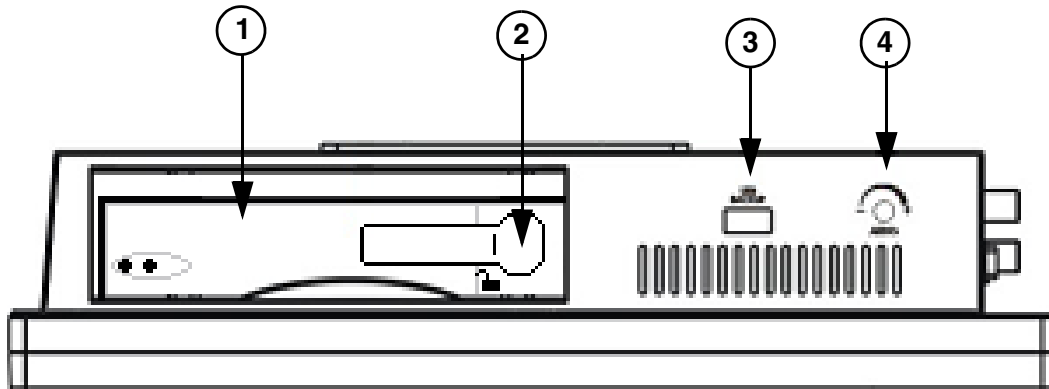
9. PLAYBACK CONTROLS:

- **BACK** – Reverses the playback.
- **STOP** - Stops the playback.
- **PAUSE** – Pauses the playback.
- **PLAY** - Plays back the recorded data.
- **REW** - Fast Rewind of the playback
- **STEP** - Playback step by step (frame by frame)
- **FF** - Fast Forward of the playback

10. DIRECTION ARROWS & ENTER:

- **DIRECTION ARROWS** - Moves the mouse cursor and navigates within the System Menu.
- **ENTER** - Confirms the selected options in the System Menu.

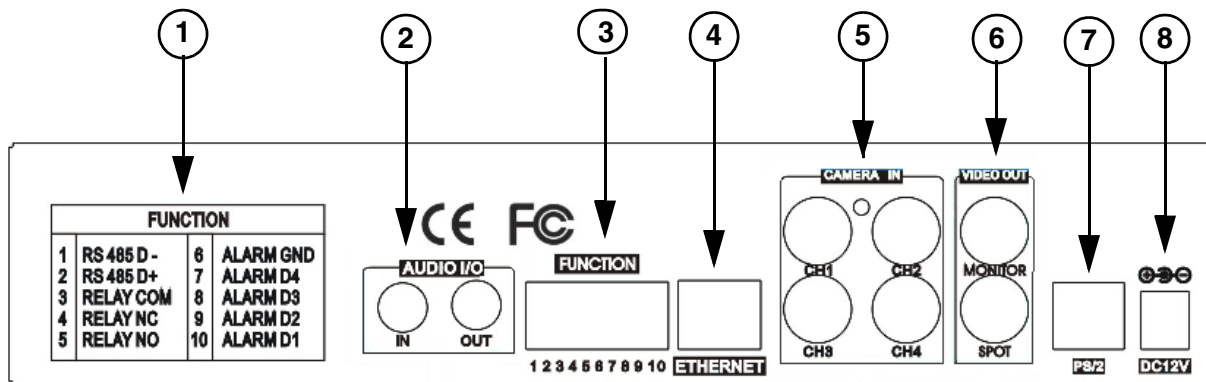
Side Panel



1. Removable Drive Bay	2. Drive Bay Lock	3. USB Backup Port	4. Volume Adjustment
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1. **REMOVABLE DRIVE BAY** - Use to change the SATA Drive to the system
2. **DRIVE BAY LOCK** - Locking mechanism for the removable drive.
3. **USB BACKUP PORT** - Connect a USB memory stick or USB HDD for data backup
4. **VOLUME ADJUSTMENT KNOB** - Use the Volume Adjustment Knob to increase or decrease the Volume Output to the AUDIO OUTPUT Port.

Back Panel



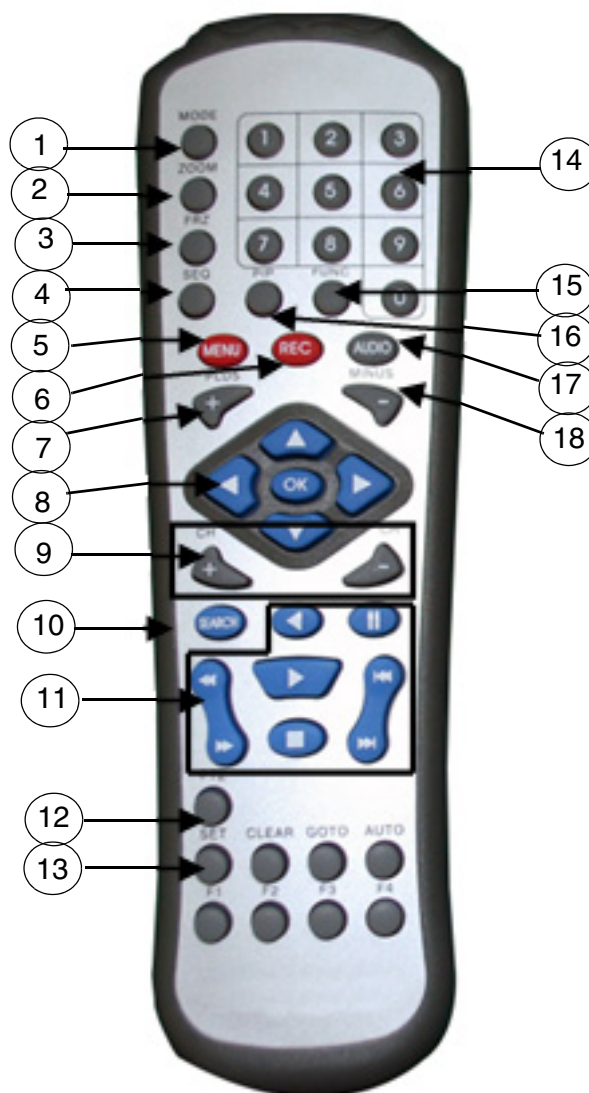
1. Alarm Block Chart	2. Audio Ports	3. Alarm Block & RS-485	4. Ethernet Port
5. CH 1~4	6. Monitor / Spot Out Ports	7. PS/2 Mouse Port	8. Power Input Port

1. **ALARM BLOCK CHART** - Outlines the Alarm Block connections
2. **AUDIO PORTS** - One Audio INPUT port, and one Audio OUTPUT port.
3. **ALARM BLOCK & RS-485 CONNECTIONS** - Controls Alarm devices, and for direct connection to PTZ cameras. 4 sensor inputs and 1 relay output.
4. **ETHERNET** - Connects the System to a network router or other Ethernet Device.
5. **CH 1~4** - BNC Camera inputs for Channels 1~4.
6. **MONITOR / SPOT OUT PORTS:**
 - **MONITOR** - Connection to a slave monitor.
 - **SPOT** - Connection to monitor using SPOT OUT.
7. **PS/2 MOUSE PORT** - Connection for a PS/2 mouse
8. **POWER INPUT PORT** - Connection for the DC Power Input (12V).

Remote Control

Listed below is the new Remote Control. All Buttons described above function the same as the Front Panel buttons.

1. **MODE** - Changes the view to 4-Channel Split Screen.
2. **ZOOM** - Zooms in on the image (must be in full screen mode).
3. **FREEZE** - Freeze the image on the current full screen channel.
4. **SEQUENCE** - Start Sequence mode.
5. **MENU** - Press to access the System Menu.
6. **RECORD** - Starts manual recording on the DVR.
7. **+ BUTTON** - Increases values and System Volume.
8. **NAVIGATION / OK** - Press the???? to navigate in Menus, and control PTZ cameras. Press OK to accept an option in Menu mode.
9. **CH +/- BUTTONS** - Press the Channel +/- buttons to switch between channels.
10. **SEARCH** - Opens the Search menu
11. **PLAYBACK CONTROLS** - Use to control the playback (fast forward, reverse, play, pause).
12. **PTZ** - Opens the Pan/Tilt/Zoom controls (only used with PTZ Cameras, not included).
13. <not used>
14. **NUMBER KEYPAD** - Used to switch between channels, and change numeric values in the Menu.
15. **FUNCTION** - Enter the Setup Menu.
16. **PIP** - Display channels in Picture in Picture view
17. **AUDIO** - Mutes the Audio (if using an Audio enabled Camera or Microphone)
18. **- BUTTON** - Decreases values and System Volume.



1	Mode	10	Search
2	Zoom	11	Playback Controls
3	Freeze	12	PTZ
4	Sequence	13	<not used>
5	Menu	14	Number Keypad
6	Record	15	Function
7	+ Button	16	PIP
8	Navigation / OK	17	Audio
9	Channel +/-	18	- Button

Camera Installation

Before you install the camera, carefully plan where and how you will position the camera, and where you will route the cable that connects the camera to the System.

Installation Warnings:

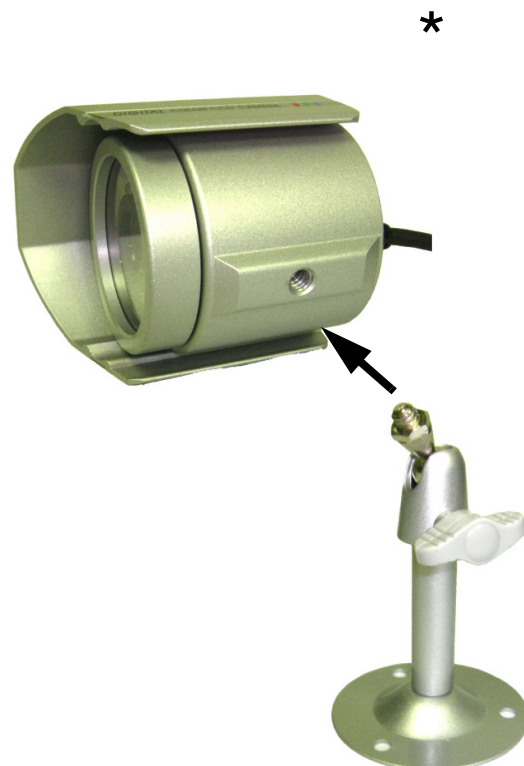
- Select a location for the camera that provides a clear view of the area you want to monitor, which is free from dust, and is not in line-of-sight to a strong light source or direct sunlight.
- Plan the cables' route so that it is not close to power or telephone lines, transformers, microwave ovens or other electrical equipment that could interfere with the system.
- Select a location for the camera that has an ambient temperature between 14°F~113°F (-10°C~45°C)
- If you plan to install the camera in a location that has conditions not recommended in this manual, consult with a professional installer and consider use of a separate camera cover or housing
- Before starting permanent installation, have another person hold the camera for you while you verify its performance by observing the image on the monitor.

Camera Stand Installation:

1. Attach the pedestal to the ceiling, wall or other surface by the base using the provided screws.
2. The mounting bracket must be attached to a structural device such as a wall stud or ceiling rafter using the supplied screws.
3. Attach the camera to the pedestal. Adjust the angle of the camera, and tighten the thumbscrew to set the position

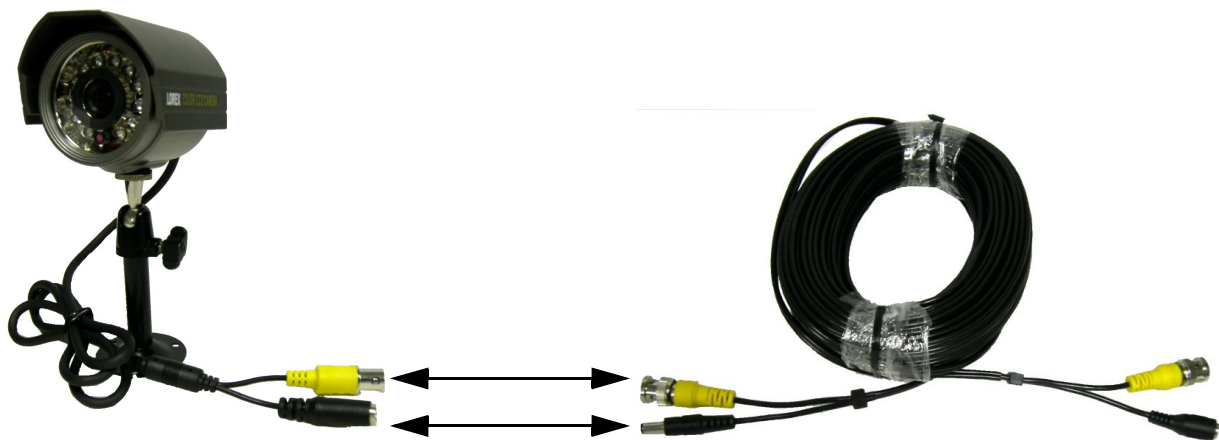
NOTE: The Camera can be attached to the stand using the screw point on the top or the bottom (to maintain proper camera alignment). This prevents the image from becoming inverted.

* Camera may not be exactly as shown.



Connecting Cameras

1. Connect the Female BNC end of the supplied 60' extension' cable to the camera. Connect the male Power end of the extension cable to the camera.

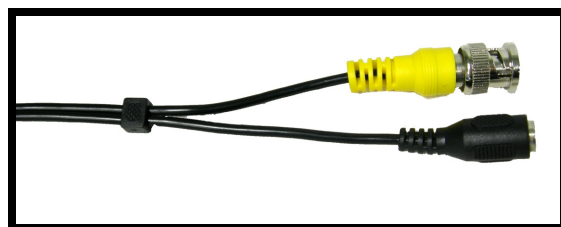


* Camera may not be exactly as shown.

IMPORTANT NOTE: The ends of the extension cable are NOT the same - one end has a Male power port, and the other has a Female power port. Before permanently running the Camera Extension Cable, make sure that the cable has been oriented between the Camera and the unit correctly

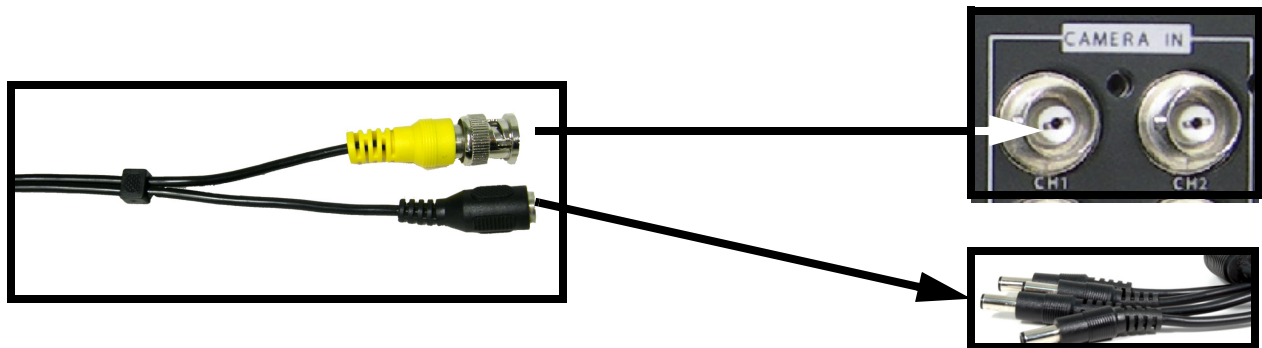


Male Power Port - The male power port end of the Extension cable connects to the Camera.



Female Power Port - The female power port end of the Extension cable connects to the System.

2. Connect the Female end of the supplied 60' extension cable to an open BNC camera input on the back of the System. Connect the female Power end of the extension cable to the 4-cable power adaptor.



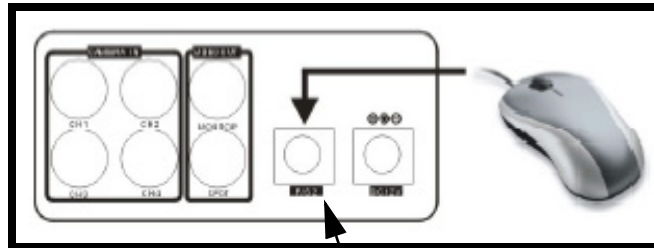
NOTE: To access the Connection Ports for the System, the monitor can be tilted forward (for easier access).



* Camera may not be exactly as shown.

Connecting the Mouse

Connect the supplied mouse to the PS/2 Port on the back of the unit. Alternatively, a mouse can be connected to the USB port located on the side of the unit.



USB Connection - A mouse can be connected to the PS/2 Port on the back panel.

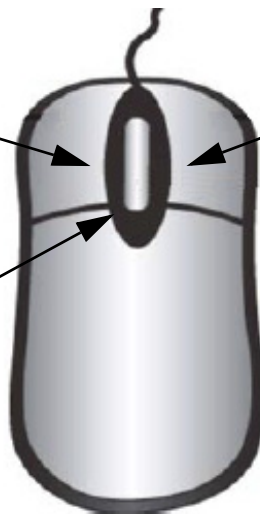
Mouse Controls

LEFT MOUSE -

- Click to activate a function.
- Used to increase values in MENU Mode.

SCROLL WHEEL -

- Increases / Decreases values in Menu Mode.
- Zooms IN/OUT in ZOOM View mode.



RIGHT MOUSE -

- Used to decrease values in MENU Mode.
- Opens / Closes the SETUP MENU.

Display Modes

Initial Loading Sequence

- Connect the POWER cable located on the back of the Observation System. The unit will automatically power on.
- The System will load the firmware
- The System will perform a Hard Drive check.
- The unit will initially load to a split screen view, displaying all 4 cameras (if available).

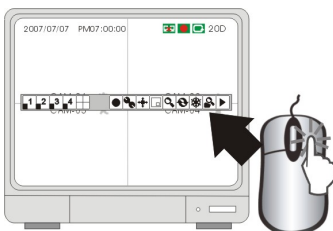
```
VER 1.21_D_A10
UPLOAD IDE_FSM Code
```

```
VER 1.21_D_A10
HDD DETECT START
[MASTER ..... OK ]
```

NOTE: If a new **HARD DRIVE** is detected, the system will prompt you to **FORMAT** the drive. If you do not choose to format the **HARD DRIVE**, the drive will not be detected by the system.

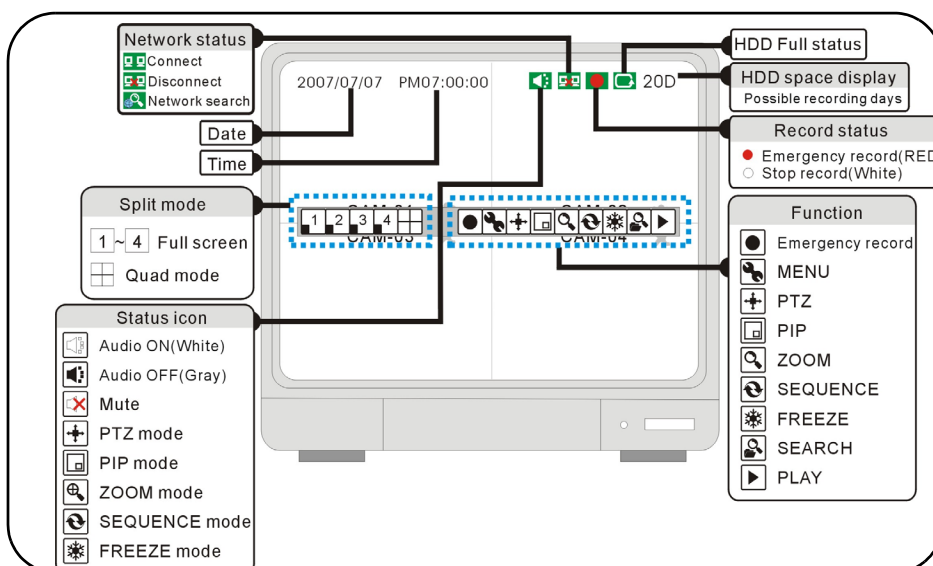
If you choose to **FORMAT** a drive in this way, the drive will no longer be readable by a regular PC without using the **HARD DRIVE VIEWER** software included on the CD provided with this unit.

Display Setup Menu



- Right click the mouse button to display the setup menu
- Right click mouse button again to hide the setup menu.

Display Configuration



Network Status Indicators

The Network Indicators appear when a remote connection is made to the unit:



- Indicates that there is no client connection.
- Indicates that a client is connected to the system.
- Indicates that a network search is being performed.

Function Icons

The function icons appear on the main screen, and can be selected using the Mouse.



Display Modes

Cameras can be displayed in Single, Quad, Sequence or PIP modes by pressing the buttons on the front panel of the System, or by using the mouse to click on the onscreen icons.

Accessing the Onscreen Setup Menu

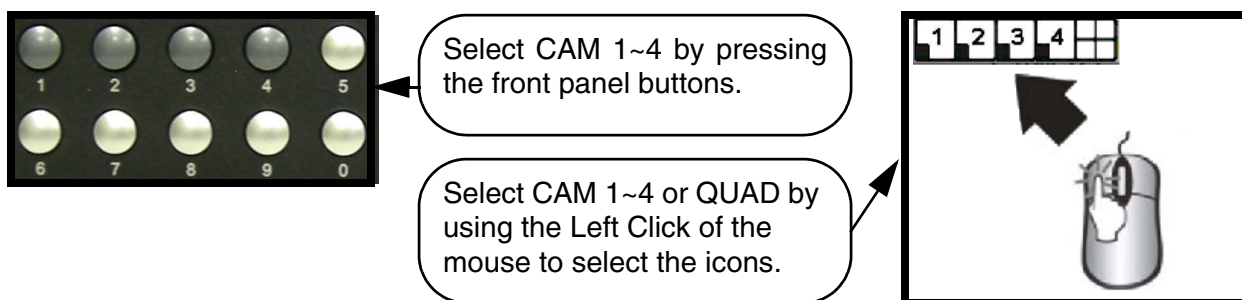
To access the onscreen Setup menu:

- Press the MENU Button on the Remote Control OR
- Press the MENU Button on the Front Panel
- Enter User Password (USER PW) with the mouse or the remote control
- Select ENTER

Options can be selected using the left and right arrow keys on the Front Panel, OR use the mouse to select the onscreen icons 1~4 or QUAD to select a channel to view.

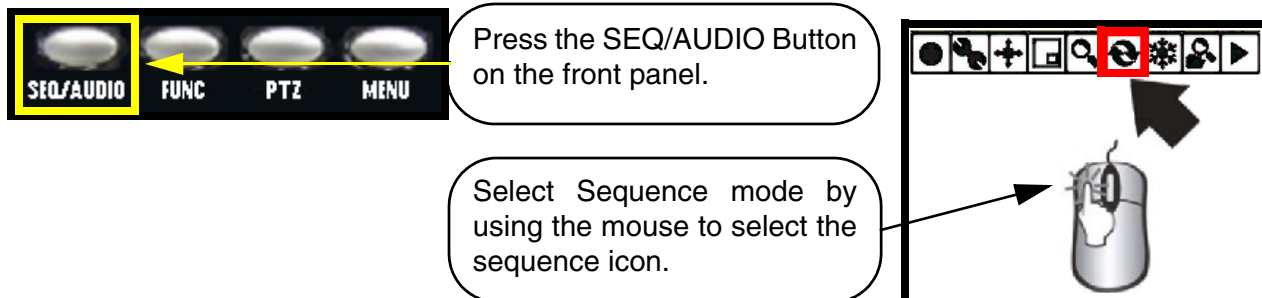
Single Channel and QUAD Display Modes

Displays cameras in full screen. Press buttons 1~4 on the front panel of the System, or use the mouse to select the onscreen icons 1~4 or QUAD to select a channel to view.

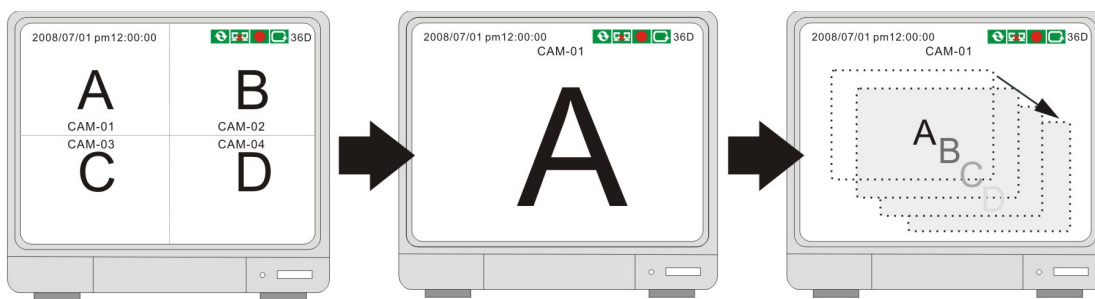


Sequence Display Mode

Displays cameras in sequence. Press the SEQ/AUDIO Button on the front panel of the System, or use the mouse to select the onscreen sequence icon. The sequence can be adjusted using the MENU SETUP.

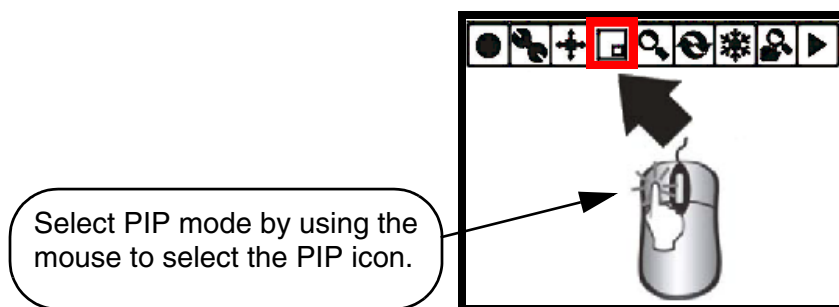


NOTE: Press and hold the SEQ/AUDIO button for 3 seconds to switch between the two options.



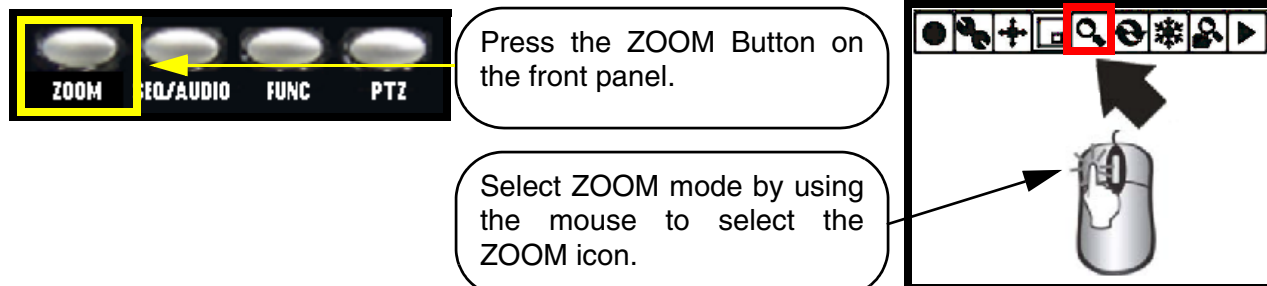
PIP Display Mode

Displays cameras in PIP (Picture in Picture) Mode. Use the mouse to select the onscreen PIP icon.



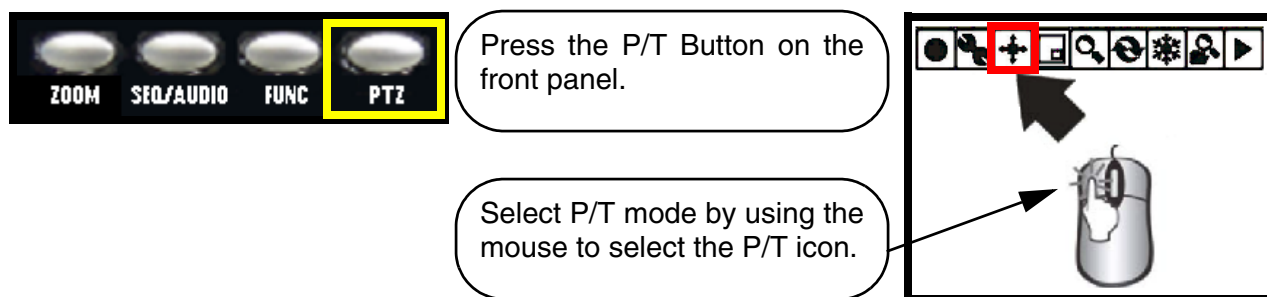
Zoom Mode

Displays a single camera in ZOOM Mode (200% Zoom). Select the channel to ZOOM, and press the ZOOM button on the front panel of the System, or use the mouse to select the onscreen ZOOM icon. The area of ZOOM can be moved using the front panel arrows, or by using the Mouse.

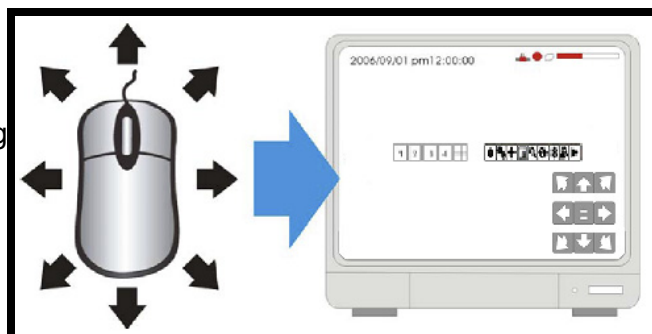


PTZ (Pan/Tilt/Zoom) & Focus Controls

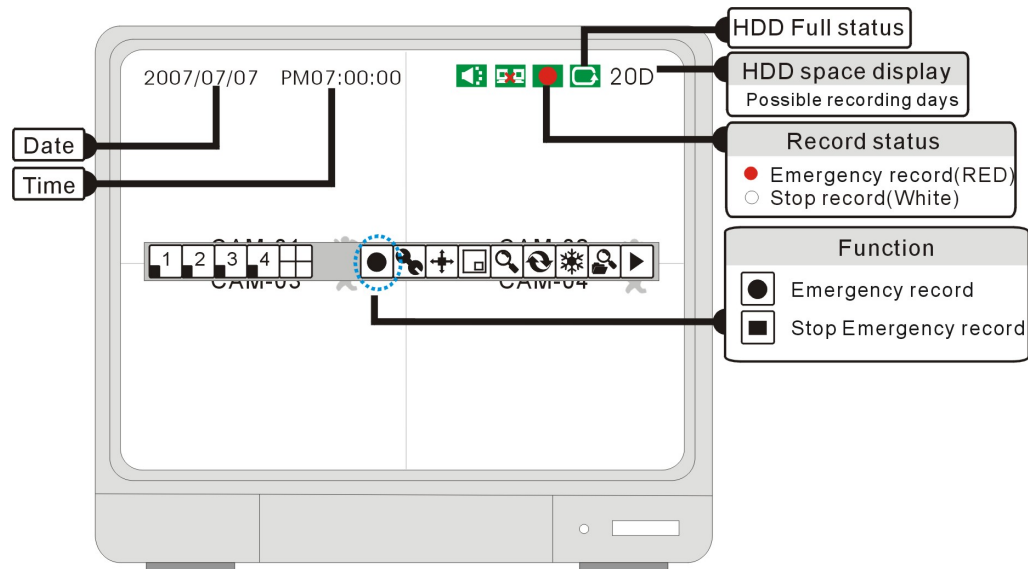
Enters PTZ control for a PTZ type camera installed on Channel 1. Press the P/T button on the front panel of the System, or use the mouse to select the onscreen P/T icon. The PTZ Camera can be moved using the Mouse. Refer to page 25 for PTZ setup instructions.



After entering the PTZ control mode, use the mouse to control the camera. Direction icons will appear in all corners of the screen. Clicking on a directional arrow will select that direction for movement.



Recording Mode



Recording status:

☒ Recording (Red dot)

Appears during "Emergency recording mode". Video is recorded at the maximum speed.

☐ Stop record (White dot)

Channel is not recording.

☒ Emergency recording

Clicking this icon will start the "Emergency recording mode".

☒ Stop emergency recording

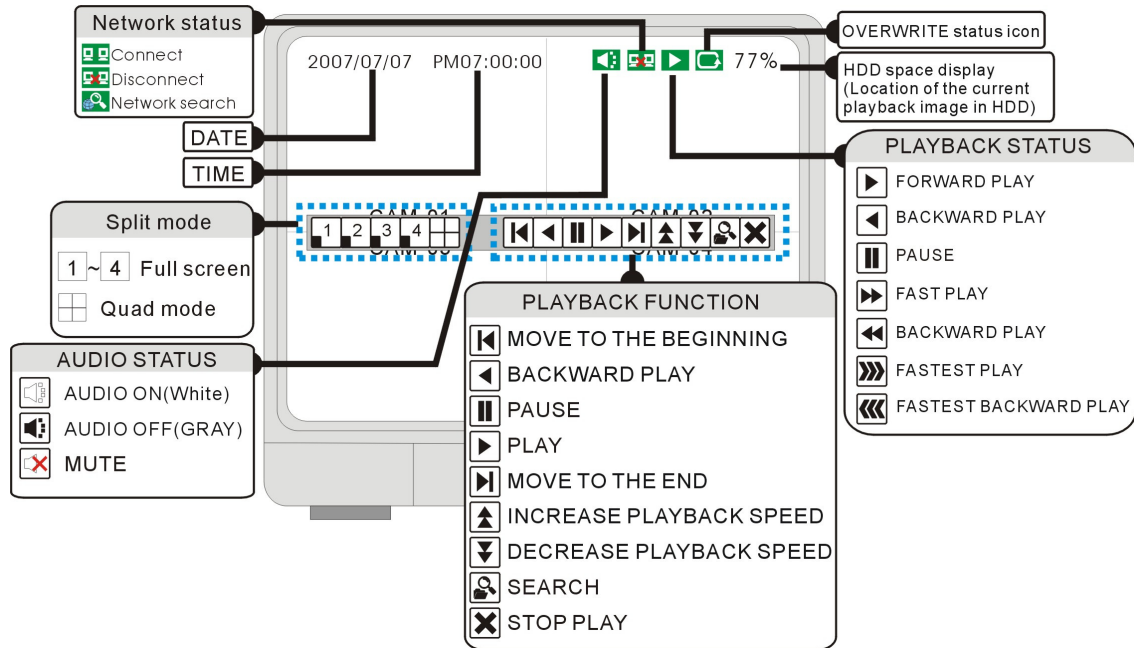
Click this icon to stop the "Emergency recording mode" (return to schedule recording mode).

If the power is cut off unexpectedly, the DVR will automatically resume its recording schedule after the power is back on.

NOTE: Under the following circumstances, the system stops recording:

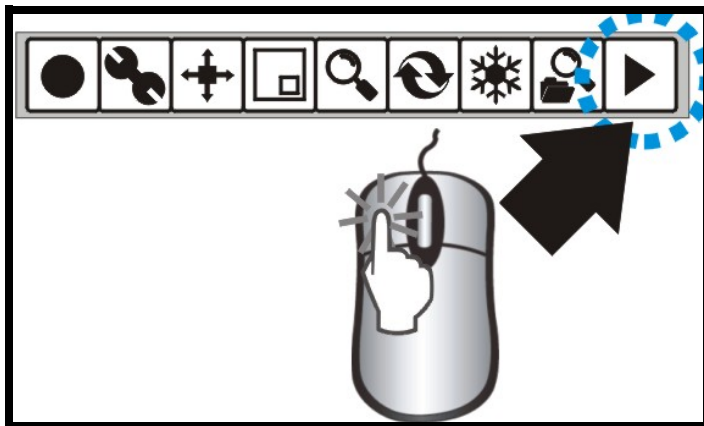
- No video inputs.
- No motion is detected while the record mode is set to MOTION.
- When the record schedule is set to Not Record.
- Without clearing HDD or running factory defaults after a new HDD is installed.
- When Overwrite function is set to OFF and HDD full.
- When Backup in process.
- When firmware update in process.

Playback



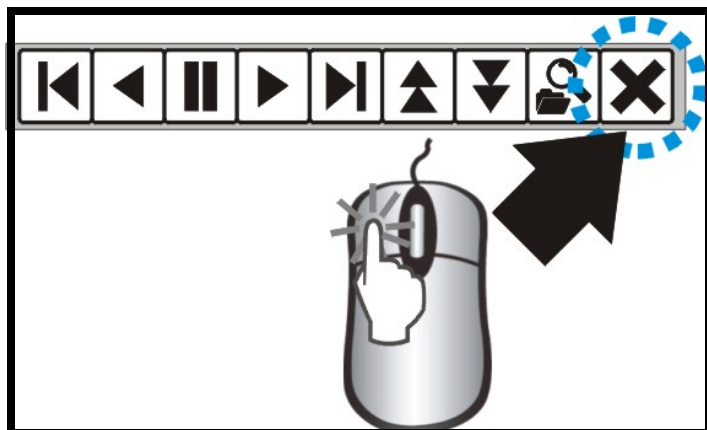
Starting Playback Mode

Left click the "Play" icon to start playback. Starting from the last playback time.



Stopping Playback Mode

Click the "Stop" icon to stop playback.



During Playback:

-  Speeds up the Playback
-  Slows down the Playback.

Search Mode

Click SEARCH icon to open the search window.

There are 3 modes for search:
PERCENT, DATE/TIME, EVENT.

[PERCENT SEARCH]

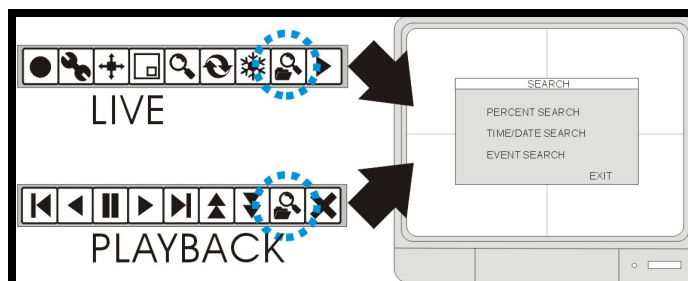
Search by the percentage of recording.

[DATE/TIME SEARCH]

Search by the assigned time and date

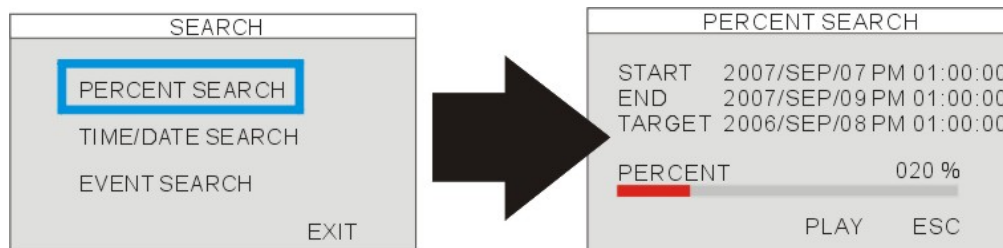
[EVENT SEARCH]

Search by event list.



Percent Search

- Use the Mouse wheel on the percentage number to change the recording percentage of the search bar.
- Click on the "PLAY" icon to confirm and start the playback.



Time/Date Search

[START]

Set the starting date and time of recorded video.
This shows the starting date and time of the recording data.

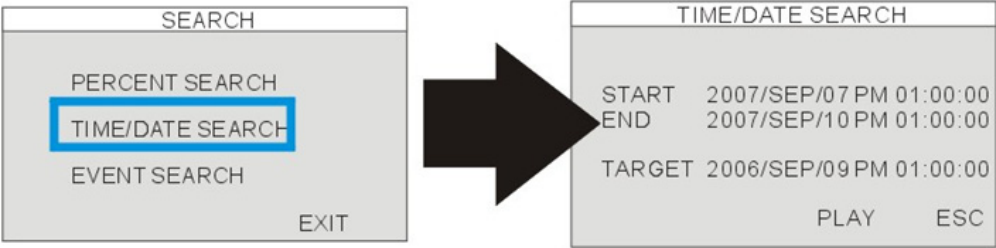
[END]

The ending date and time of recorded video.
It shows the ending date and time of the recorded video.

[TARGET]

Enter the assigned date and time to start playback. The targeted date and time can be adjusted by Mouse wheel.

Click the "PLAY " icon to start playback.



Event Search

[DATE/TIME]

Shows the event date and time.

[CH]

Video channel in No. of happened event.

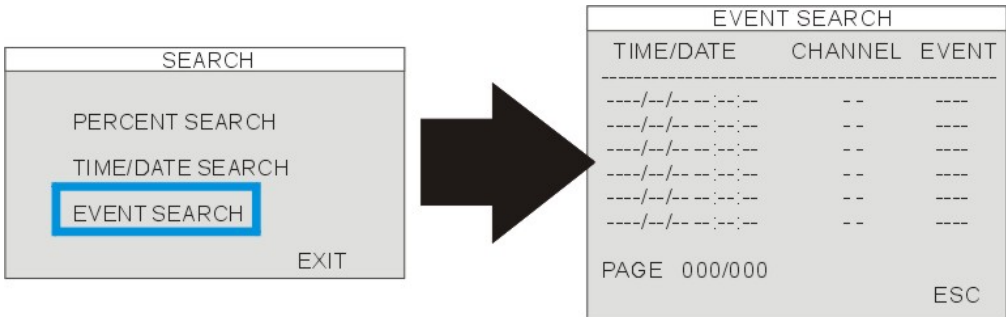
[EVENT]

Shows the type of events: Motion detection (MOT), Image lost (LOS), Alarm trigger(ALM).

Max. Event list recorded: 1000 events.

Select events: left click

Change page: mouse wheel scrolling.



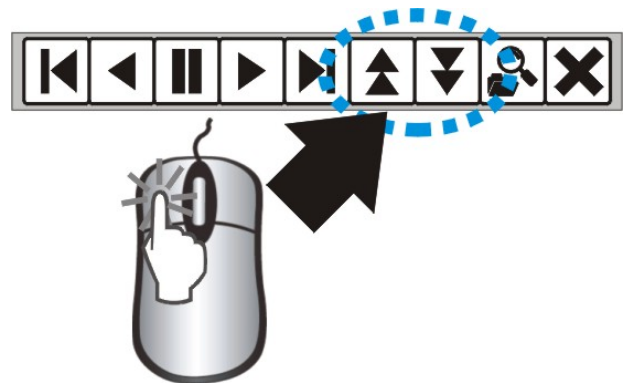
Playback Speed Control

When in playback mode, Click the onscreen playback icons to adjust the playback speed:

- Speed up the playback
- Slow down the playback
- Rewind the playback
- Play

While in playback, click:

-  To speed up the playback
-  To slow down the playback



To increase the speed:

- REW key (High-speed backward playback)
- FF key (High-speed forward Playback).
- Press the keys repeatedly to adjust the speed rate.

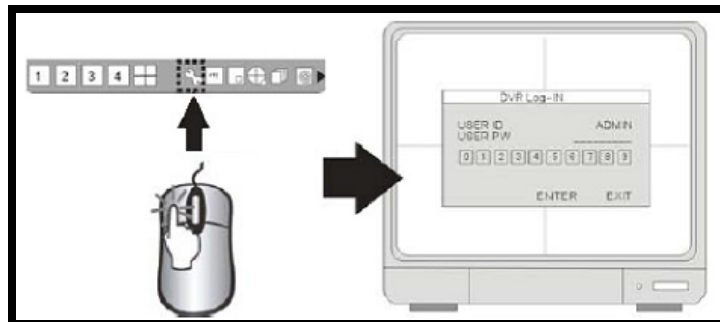
To decrease the speed

- Use the STEP keys to Slow playback (in reverse or forward).
- Press the keys repeatedly to adjust the speed rate.
- Playback picture by picture by STEP keys (Step playback in backward or in forward).

System Setup and Navigation

Press the MENU button on the Front panel or Remote, or click the onscreen MENU icon to log into system:

- Click the 0~9 icons (or use the front panel buttons) to enter the password.
- Click ENTER to confirm and enter the system.
- Default ADMIN password: leave blank (No default password. Press ENTER key directly to enter the system)
- Navigate using the arrows. Use ENTER to accept an option, and ESC to exit the menu.



NOTE: It is strongly recommended to change the password after the initial setup. Please keep a record of your current password. Rebooting the System and resetting the factory defaults will not reset the password to the default.

System Menu - Overview

[DISPLAY SETUP]

SCREEN SETUP, OSD SETUP.

[RECORD]

RECORD CONFIGURATION, SCHEDULE SETUP.

[CONFIGURATION]

HDD MANAGEMENT, DATE/TIME SETUP, CAMERA SETUP, INTERVAL SETUP, ALARM SETUP, BUZZER SETUP, PASSWORD SETUP.

[EXTERNAL DEVICE]

TCP/IP SETUP, SPOT MONITOR SETUP, PAN-TILT SETUP, AUDIO SETUP.

[BACK-UP]

Backup the selected video.

[FIRMWARE UPGRADE]

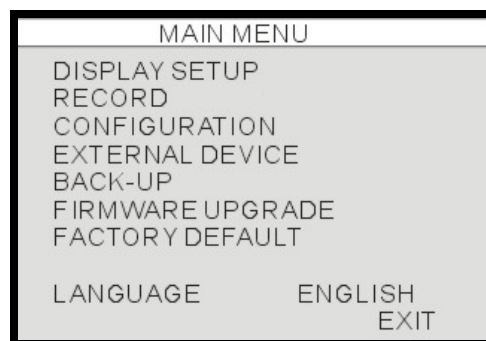
Upgrade the firmware using CD-RW or USB memory stick.

[FACTORY DEFAULT]

Reset the DVR to factory defaults.

[LANGUAGE]

Change the OSD MENU language.



Display Setup - Screen Setup

[VERTICAL POSITION]

Adjust the vertical position of display.

[HORIZONTAL POSITION]

Adjust the horizontal position of display.

[BORDER ENABLE]

Enable the display of border.

[BORDER COLOR]

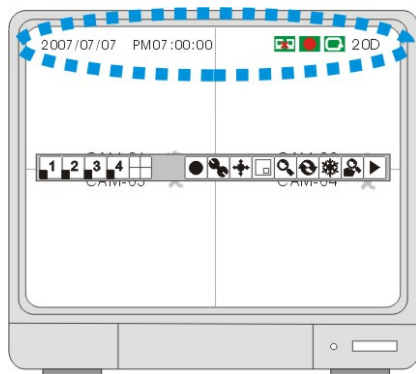
Adjust the color of border.

SCREEN SETUP	
VERTICAL POSITION	24
HORIZONTAL POSITION	00
BORDER ENABLE	ON
BORDER COLOR	WHITE
DEFAULT	ESC

Display Setup - OSD Setup

[TOP OSD OFFSET]

Adjust the location of Top OSD.



OSD SETUP	
TOP OSD OFFSET	0
DEFAULT	ESC

Display Setup - VGA Setup

[BRIGHTNESS]

Adjust LCD brightness.

[CONTRAST]

Adjust LCD contrast

VGA SETUP	
BRIGHTNESS	0
CONTRAST	0
DEFAULT	ESC

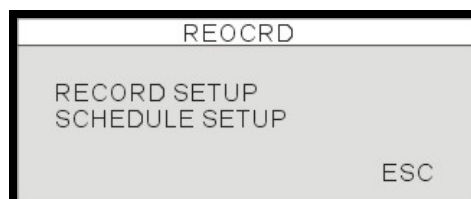
Record Setup

[RECORD SETUP]

Set up the recording picture quality.

[SCHEDULE SETUP]

Program the recording schedule.



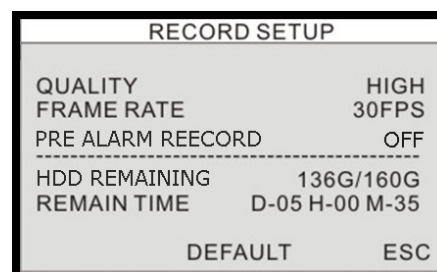
Record Setup - Record Configuration

[QUALITY]

Set up the recording picture quality

Quality level: Normal / High / Highest.

Data size of image in PAL system is a little bigger than NTSC system, but the total recording time is same as NTSC system.



- **NOTE:** The Data size of the image in the PAL system is larger than the NTSC system. The total recording time is the same between the PAL and NTSC systems. To transmit more images via the network (and to set a longer recording time) set the Quality to “LOW” or “Mid” and recording at 352×240(360×288).

[FRAME RATE]

Adjust recording frame rate.

[PRE ALARM RECORD]

Displays the amount of time included from the Pre Recording (in sec).

[HDD REMAINING]

Indicates HDD capacity remains by size (GB). / Indicates total HDD capacity (GB).

[REMAIN TIME]

Indicates HDD capacity remains by time.
(D- days, H- hours, M- Minutes.

Record Setup - Schedule Setup

CHANNEL - Select a single channel to setup the schedule.

TYPE - Select a recording mode:

Program the recording schedule for the whole year.

Set up the recording mode in different date / time:

  : Continuous recording.

  : Motion recording when there is motion detected

  : Alarm recording. When there is an alarm triggered.

   : Motion recording + Alarm recording.

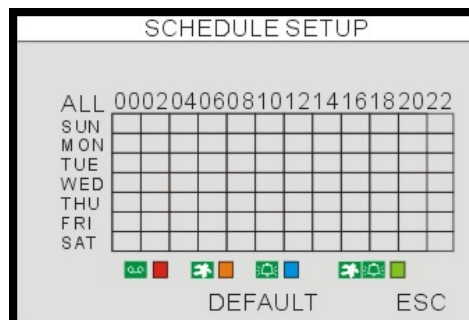
ALL: All blocks can be activated or deactivated.

00~24 Hour: To activate or cancel the hours .

SUN~SAT: To activate or cancel the day.

NOTE: If the DVR is set to MOTION RECORDING and the DVR keeps recording continuously or is not triggered to record as expected, please check the sensitivity settings and the motion mask setup in CONFIGURATION>MOTION SETUP.

If the motion settings are too sensitive, you may want to lower the sensitivity level and define a motion detection area for more accuracy. If the motion is not triggered as expected, you may want to increase the sensitivity level, clear the motion mask, or enlarge the detection area.



Configuration

[HDD MANAGEMENT]

HDD SETUP (HDD Clear), HDD INFORMATION.

[CAMERA SETUP]

CAMERA TITLE, CAMERA COLOR SETUP.

[MOTION SETUP]

SENSITIVITY, DURATION, DETECT CELL NUMBER.

[ALARM SETUP]

Alarm mode (N.C. or N.O) setup, Alarm Output Duration setup.

[INTERVAL SETUP]

Switching interval between Full screen and the PIP screen.

[DATE/TIME SETUP]

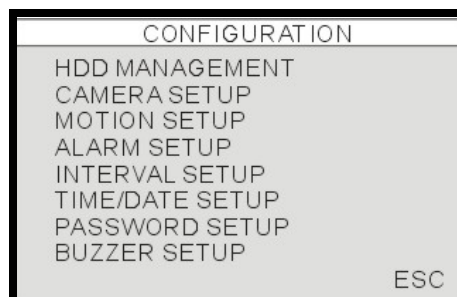
Date and time setup.

[PASSWORD SETUP]

Password setup.

[BUZZER SETUP]

Buzzer ON/OFF setup.



HDD MANAGEMENT

This menu displays the Hard Drive information.
HDD information display:

MODEL: Model No.

SERIAL: Serial No.

BLOCKS: Number of blocks

SIZE: Capacity

SPEED: Data process speed



[FORMAT]: format HDD (all record will be erased).

The HDD Management also allows the user to set the OVERWRITE to ENABLE or DISABLE.

NOTE: If the OVERWRITE option is set to ENABLE, data on the Hard Drive will be overwritten (once the drive is full). If DISABLE is selected, the unit will stop recording once the Hard Drive is full.

CAMERA SETUP

[CHANNEL]:

Select the camera to be adjusted.

TITLE: camera name, max. 8 characters.

BRIGHTNESS: Adjust image brightness (-32~31).

CONTRAST: Adjust color contrast (-32~31).

SATURATION: Adjust color saturation (-32~31).

HUE: Adjust color hue(-32~31).

HORIZONTAL POSITION: Adjust camera display horizontal position.

LIVE DISPLAY: Set up the channel to be displayed or not at the LIVE screen.

CAMERA SETUP		
CHANNEL		1
TITLE	CAM01	
BRIGHTNESS		0
CONTRAST		0
SATURATION		0
HUE		0
HORIZONTAL POSITION		4
LIVE DISPLAY		ON
DEFAULT ALL-DEFAULT ESC		

MOTION SETUP

[CHANNEL]

Select the channel to be adjusted.

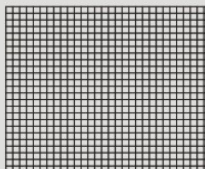
[SENSITIVITY]

Adjust motion detection sensitivity. 1 (LOW) ~ 7 (VERY HIGH)

[DURATION]

The recording period after last motion detected.

For example, the duration is set to 10 seconds and the motion last for 3 minutes. The DVR records for 3 minutes and 10 seconds.

MOTION SETUP		
CHANNEL	1	
SENSITIVITY	5	
DURATION	05	
SIZE	01	
DEFAULT ALL-DEFAULT ESC		

[SIZE]

Select the CELL SIZE for Blocked Area (RED).

DEFAULT : 2 cells

DETECT CELL NUMBER - Recording will only be triggered when the cells in motion are MORE THAN the number the user has set. The smaller the number, the more sensitive the detection is.

MOTION MASK - Area detection setup - sets which areas detect motion and which areas do not detect motion.

The area that is not detecting motion is Grey.

RED block:no detection (mouse left click)

Transparent block:detection (mouse right click)

Motion can trigger relay output in motion record.

ALARM SETUP

[CHANNEL]

Select the channel to be setup.

[INPUT]

Set up the Alarm input format.

NORMAL CLOSE- when the alarm is triggered, alarm output becomes open circuit.

NORMAL OPEN- when the alarm is triggered, alarm output becomes close circuit.

[DURATION]

For both post-alarm recording duration and the alarm output duration.

(1~99 seconds).

NOTE: Alarm output can be triggered by both alarm input and video loss.

Alarm output can not be triggered by motion detection.

ALARM SETUP	
CHANNEL	1
INPUT	DISABLE
DURATION	01 SE
ALL-DEFAULT DEFAULT ESC	

INTERVAL SETUP

[SEQUENCE SCREEN]

Interval setup for all channels sequential full screen display
(Range: 1~99 seconds)

[PIP SCREEN]

Picture in Picture, the sub-picture's sequence interval setup.

(Range: 1~99 seconds)

[EVENT UPDATE]

In order to avoid the same event (alarm, motion and video loss) recorded from time to time, the event happens within the EVENT UPDATE period will not be recorded.

(Range: 10~990 seconds)

INTERVAL SETUP	
SEQUENCE SCREEN	01 SEC
PIP SCREEN	01 SEC
EVENT UPDATE	600 SEC
DEFAULT ESC	

TIME/DATE SETUP

Please set up the system date and time before the DVR starts recording. The date and time can be adjusted by Mouse wheel.

DATE FORMAT- Asia/American/European.

HOUR FORMAT- 12 hours/24 hours.

MONTH FORMAT- English/Numeric

TIME/DATE SETUP	
DATE	2007/JUL/09
TIME	01:00:00
DATE FORMAT	ASIAN
HOUR FORMAT	24HOUR
MONTH FORMAT	ENGLISH
DEFAULT ESC	

1. We strongly suggest completing the following settings at the initial setup.

(1) Set up the DATE/TIME, and RUN all factory defaults.

(2) Format HDD (setup MENU -> HDD MANAGEMENT -> FORMAT)

2. DO NOT change the date and time after the recording starts. It may corrupt the DVR data archive and causes playback error. If change date and time is required after the recording starts, please format HDD to avoid error.

PASSWORD SETUP

The password consists of 1 to 8 digits. Click 0~9 icon to enter the password. Then, click ENTER to confirm and enter the system.

[USER ID]

Display User ID.

[USER PW]

Enter the current password.

[NEW PW]

Enter the new password.

[CONFIRM]

Enter the new password again for confirmation.

PASSWORD SETUP	
USER ID	ADMIN
USER PW	-----
NEWPW	-----
CONFIRM	-----
0 1 2 3 4 5 6 7 8 9	
ENTER EXIT	

BUZZER SETUP

[KEY TONE]

Turn on/off the buzzer for any key press on the Front panel, remote control or Mouse Menu.

[VIDEO LOSS]

Turn on/off the buzzer when a video loss warning occurs.

[ALARM ACTIVE]

Turn on/off the buzzer when alarm is triggered.

[MOTION DETECT]

Turn on/off the beeping when motion is detected.

[DURATION]

Set the buzzer duration to Continuous, or between 10~590 Seconds.

BUZZER SETUP	
KEY TONE	ON
VIDEO LOSS	ON
ALARM ACTIVE	ON
MOTION	OFF
DURATION	CONTINUE
DEFAULT ESC	

EXTERNAL DEVICE

[TCP/IP SETUP]

TCP/IP configuration.

[PANTILT SETUP]

Speed Dome camera related setting.

[MOUSE SETUP]

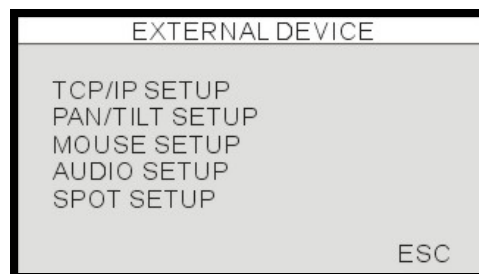
Mouse sensitivity setup.

[AUDIO SETUP]

AUDIO input and output volume setup.

[SPOT SETUP]

SPOT monitor setup.



TCP/IP SETUP - IP SETUP

[MAC ADDRESS]

Display the DVR MAC address (not editable).

[DHCP MODE]

Automatic: auto setting for IP Port, IP Address, Gateway and Subnet.

Manual: Manually configure IP Port, IP Address, Gateway and Subnet.

[IP PORT]

IP Port setting.

[IP ADDRESS]

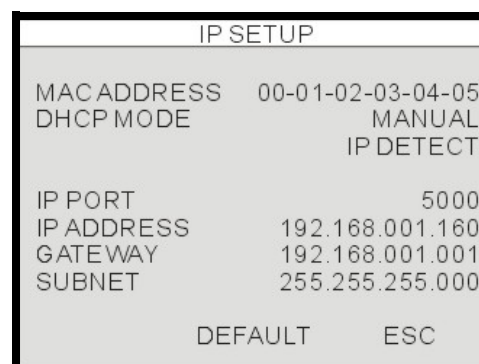
IP address setting.

[GATEWAY]

GATEWAY setting.

[SUBNET]

SUBNET MASK setting.



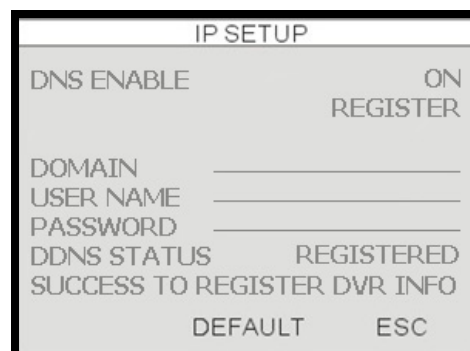
TCP/IP SETUP - DDNS SETUP

[DNS ENABLE]

Turns using the DNS Server to ON or OFF.

[REGISTER]

Click the Register option to have the System register with the DDNS Server. A message indicating a Successful connection will appear at the bottom of the screen (Success to register DVR Info)



[DOMAIN]

Enter the Domain Name used when registering the DDNS (only the first part is needed, not the lorexddns.net part).

[USER NAME]

Enter the User Name set when configuring the DDNS.

[PASSWORD]

Enter the Password set when configuring the DDNS.

[DDNS STATUS]

Displays a REGISTERED message once the DDNS has been configured, and the Register button has been clicked.

TCP/IP SETUP - SPEED

Controls the system bandwidth use (network speed). Settings between 1 (low) ~ 9 (high)

PAN/TILT SETUP - COMMAND SETUP

[CHANNEL]

Select video channel.

[MODEL]

Select PTZ protocol.

[PTZ ID]

PTZ ID setup.

[BAUDRATE]

Baud Rate setup for the connected PTZ camera.

[CMD DELAY]

Set up the delay time to run the command.

[COMMAND]

Display the COMMAND name
(Click to change COMMAND)

[LENGTH]

Display the code length for the selected COMMAND.

[CODE]

Display the code for the selected COMMAND.

COMMAND SETUP	
CHANNEL	01
MODE	PELCO-D
PTZ ID	001
BAUDRATE	2400 BPS
CMD DELAY	1 MSEC
COMMAND	PAN/TILT STOP
LENGTH	16
CODE	00 00 00 00
	00 00 00 00
	00 00 00 00
	00 00 00 00
DEFAULT ALL-DEFAULT ESC	

PAN/TILT SETUP - SPEED SETUP

[PAN SPEED]

PAN speed setup.

[TILT SPEED]

TILT speed setup.

[ZOOM SPEED]

ZOOM speed setup.

SPEED SETUP	
PAN SPEED	7
TILT SPEED	7
ZOOM SPEED	7
DEFAULT	ESC

SPOT SETUP

[SWITCH INTERVAL]

Channel switching time.(Range:01 ~ 99 sec)

[ALARM POP UP]

Switch to the channel with alarm triggered.

[MOTION POP UP]

Switch to the channel with motion detection triggered.

[EVENT POP UP DURATION]

The display will switch to the channel with EVENT triggered.

Before time up as duration setup, the displayed channel will not be changed even there is any other EVENT triggered.

(Range:01 ~ 99 sec)

SPOT SETUP	
SWITCH INTERVAL	03 SEC
ALARM POP UP	ON
MOTION POP UP	ON
EVENT POP UP DURATION	05 SEC
DEFAULT	ESC

MOUSE SETUP

[SENSITIVITY]

Mouse sensitivity setup.

The mouse cursor will move faster if the sensitivity is increased.

MOUSE SETUP	
SENSITIVITY	3
DEFAULT	ESC

AUDIO SETUP

[CHANNEL]

Select video channel links with audio.

The linked video channel will have audio in signal channel display and playback.

[INPUT VOLUME]

Volume setup for microphone

[OUTPUT VOLUME]

Volume setup for speaker.

AUDIO SETUP	
CHANNEL	CH1
INPUT VOLUME	15
OUTPUT VOLUME	07
DEFAULT	ESC

BACKUP

USB BACKUP SUBMENU

[HDD]

START: Changeable date and time for the backup start date/time.

END: Display the automatically calculated ending date and time for the backup video.

[USB MEDIA]

PARTITION: Display partition information for USB disk

SIZE: Changeable capacity used for video backup.

[BACK-UP]

Click on BACK-UP to start the backup process. The backup file will be saved in AM4 format. Users need to install the program of BACKUP PLAYER to playback the backup file.

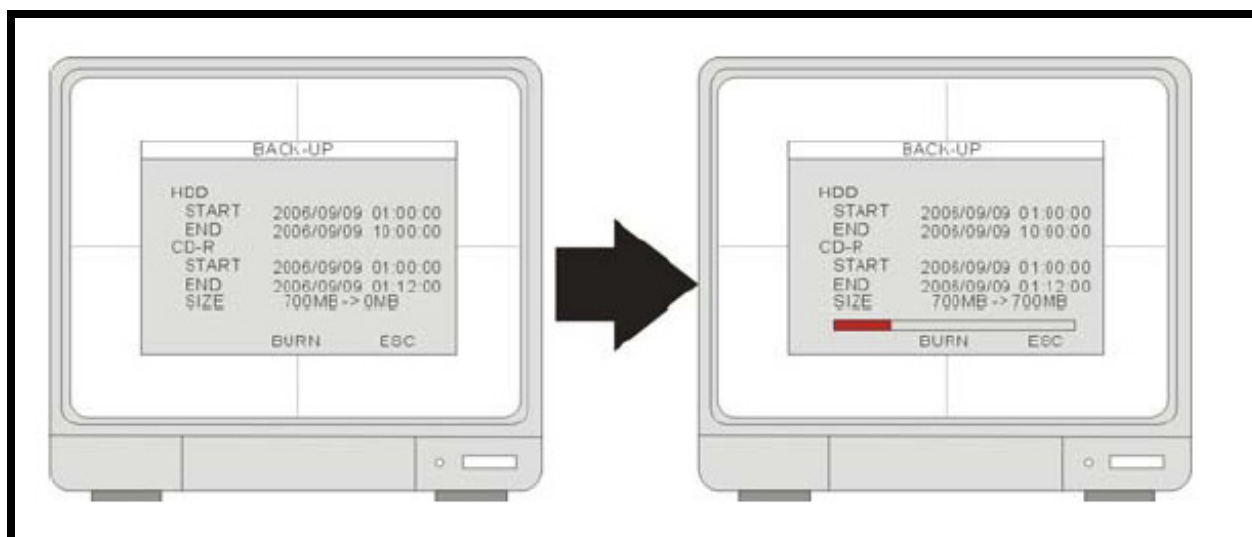


Data Backup

System status messages:

- **USB STATUS** - Insert USB Key - the system will check the available space.

When choosing a backup size, leave 20MB as a buffer and do not use the full space of the USB Stick.



FIRMWARE UPGRADE

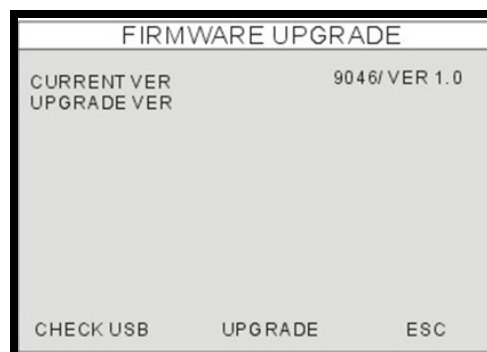
The firmware can be upgraded via USB pen drive.

Enter the **FIRMWARE UPGRADE** menu for firmware upgrade process through USB port.

Through USB port:

Click [CHECK USB], then click [UPGRADE].

The message "POWER OFF AND POWER ON" will be displayed when firmware process finished. Please restart DVR by power off then power on.



FACTORY DEFAULT

Click on ON or OFF to change the setting.
Click on DEFAULT to reload the Factory Default settings.

CHANGE FACTORY DEFAULT (For ADMIN only)

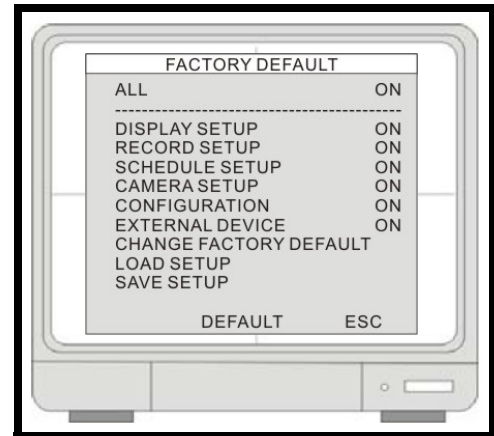
Make all settings of USB memory stick as default value.

LOAD SETUP (For ADMIN only)

Read the settings in USB memory stick.

SAVE SETUP (For ADMIN only)

Store all DVR settings into the USB memory stick.



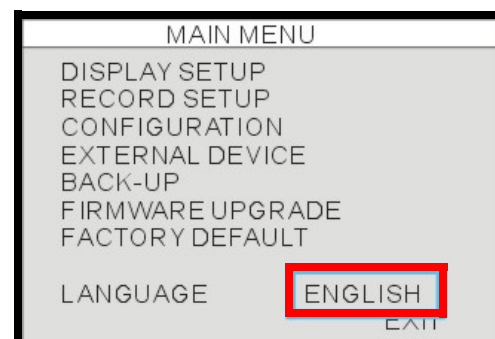
1. The password will not be changed by "Factory Default" .
2. Running both Factory Default and FORMAT HDD process are suggested after a new HDD installed.

LANGUAGE

LANGUAGE

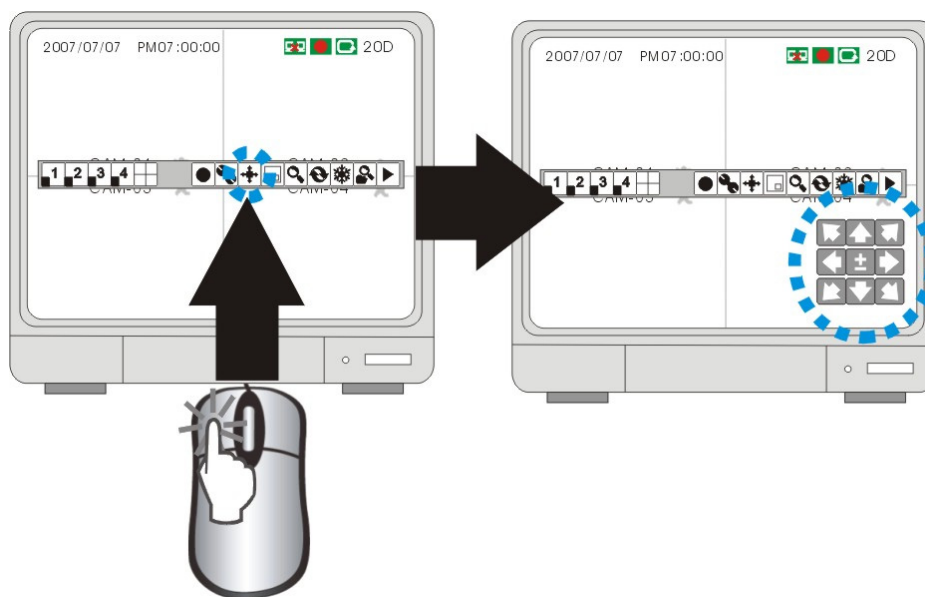
With the mouse Left Click the current language to change the OSD language.

- English
- Spanish
- French



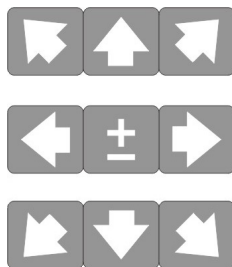
Camera Operation

Left click PTZ icon to enter the PTZ control mode.



[PAN/TILT control]

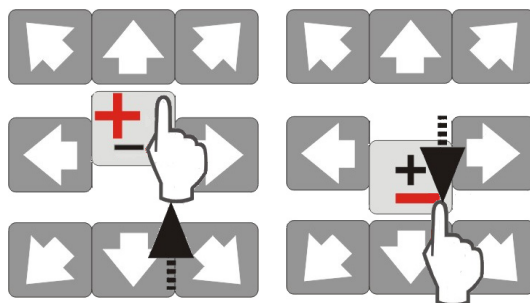
Click these arrow keys to control Pain/Tilt of connected PTZ camera.



[ZOOM IN/ZOOM OUT control]

ZOOM IN: move mouse cursor to "+"

ZOOM OUT: move mouse cursor to "-"



Troubleshooting

When a malfunction occurs, it may not be serious and can be corrected easily. The following describes the most common problems and solutions. Please refer to the following before calling Lorex Technical Support:

Problem:

Observation System Unit is not receiving power, or is not powering up

Check:

- Confirm that all cables are connected correctly.
- Confirm that the power adaptor is securely connected to the back of the unit.
- Confirm that there is power at the outlet:
 - By connecting the power cable to another outlet
 - Test the outlet with another plugged device (such as an electric calculator or phone charger)
- If the unit is connected through a power bar or surge protector, try bypassing the bar and connecting the power directly to the wall outlet.
- Confirm that the unit is powered on (LED indicators on the front should be ON).

Problem:

Observation System is not detecting the Hard Drive.

Check:

- Confirm that the hard drive is securely installed, and locked into the unit using the provided key.
- Check that the drive is set to MASTER (see Appendix #8 for details)

Observation System Specifications - Appendix #1

DVR

Monitor

Storage Capacity:	1 SATA HDD, pre-installed (Maximum 400 GB)	LCD Panel:	Diagonal: 15.0" TFT, Input: TTL / LVDS.
Triplex:	View/ Playback / Record simultaneously	LCD Display Resolution:	1280 x 1024
Compression:	H.264	Video Input:	4CH (4 x BNC)
Recording Speed:	120fps (NTSC)/ 100fps (PAL)	Video Output:	Monitor / Spot (BNC x 1)
Recording Resolution:	CIF 352 x 240(CIF), 352 x 288(PAL)	Audio Input:	1 x RCA
Display:	Real time for all channels	Audio Output:	1 x RCA
Recording Mode:	Continuous, Motion, Schedule, Alarm	Split Screen:	Full screen, Quad split
Search Mode:	Percentage Search, Date/ Time Search, Event Search	Zoom:	Available
Password Protection:	Yes	PIP (Picture in Picture):	Available
Alarm Input:	4 Alarm (NO/NC)	LCD Color Resolution:	16.7 M (8 bits)
Relay Output:	1 (NO/NC)	LCD Pixel Pitch:	0.297 mm (H) x 0.297 mm (V)
Backup:	USB2.0(HOST) back-up , Download via Network	LCD Brightness:	300 cd/m2
Network (TCP/IP):	Remote live view, playback, and download as AVI file	Control Device:	Remote Controller, Mouse (USB and PS2)
Firmware upgrade:	USB port for firmware upgrade	Power Supply:	DC Adapter (12V DC 8A)
Network Protocol:	TCP/IP, DDNS and Web	Dimension:	395 mm(W) x 159 mm(D) x 391 mm(H)
Network Interface:	10/100-Base-TX, RJ-45	Weight (N.W):	8 kgs (W/O HDD)
		Operation Temperature:	41°F~104°F (5°C~40°C)
		Operation Humidity:	Less than 90%

Camera

Image Sensor:	1/3" Color CCD Image Sensor
Video Format:	NTSC / PAL
Effective Pixels:	NTSC: 512H x 492V(252K) / PAL: 512H x 582V(298K)
Resolution:	420 TV Line
Scan System:	NTSC: 525 Lines 2:1 interlace PAL: 625 Lines 2:1 interlace
Sync System:	Internal
S/N Ratio:	More than 48dB
Iris:	AES
AES Shutter Speed:	NTSC: 1/60 ~ 1/100,000 Sec. PAL: 1/50 ~ 1/100,000 Sec.
Mini Illumination:	0.1 Lux without IR LED, 0 Lux with IR LED
Video Output:	Composite 1.0Vpp @ 75 ohm
Lens/ Lens Mount:	4.3 mm Fixed
FOV (Diagonal):	75 degrees
Termination:	BNC
IR LED/ Night Vision Range:	18 IR LED 850nm/ 12m (40 ft.)
Power Requirement:	12 V DC +/- 10%
Power Consumption:	250 mA Max 12V DC
Operating Temp Range:	-10°~50° C / 14° ~ 122° F
Unit Weight:	560 g
Environmental Rating:	IP66

NOTE: Camera configuration and Specification may vary by model.

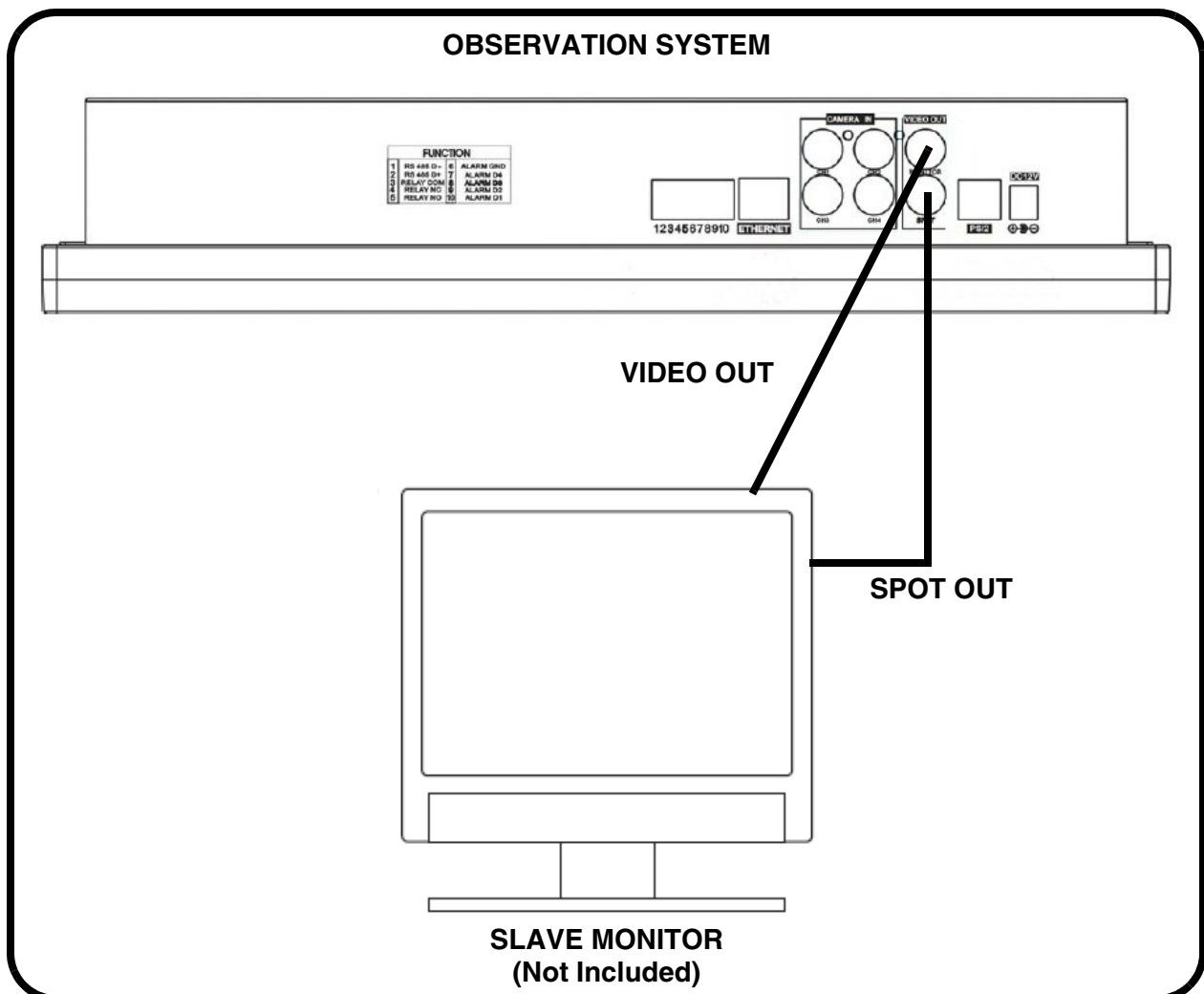
Connecting a Slave (Spot-Out) Monitor - Appendix #3

Connections to a Slave Monitor / Spot-Out Monitor (not included with the System) can be made through the VIDEO OUT and/or the SPOT OUT ports on the back of the Observation System. A slave monitor can be a TV or Computer Monitor with VGA inputs.

A Slave Monitor is used as a View Only device. A Slave Monitor can only display camera data as it is sent from the Observation System (based on settings in the Spot Out Menu options).

- **VIDEO OUT** - Connect the VIDEO OUT port on the back of the Observation System to the VIDEO IN port on the back of the Slave Monitor. This will output all onscreen video to a secondary monitor.
- **SPOT OUT** - Connect the SPOT OUT port on the back of the Observation System to the VIDEO IN port on the back of the Slave Monitor

NOTE: The Video OUT and Slave out can be used at the same time, however separate monitors will need to be used.



Connecting Motion / Alarm Device - Appendix #4

Motion detection and Alarm controls are enabled through the Menu system on the Observation System. Additional motion sensor devices can be connected to the system (Motion Sensors, Door/Window Sensors).

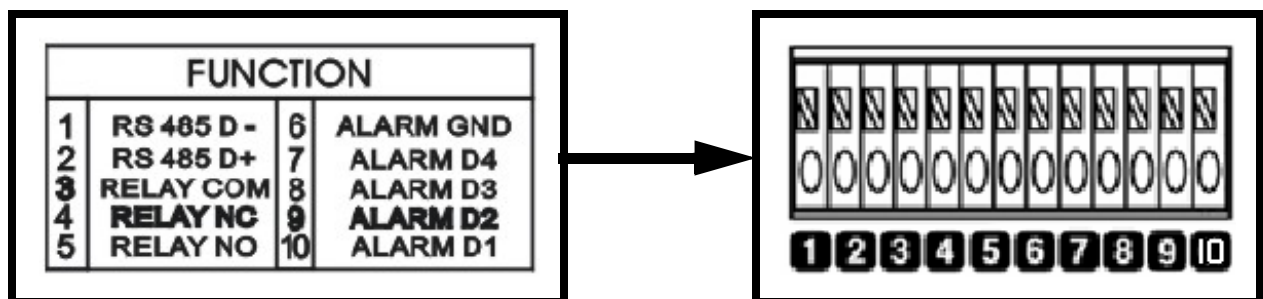
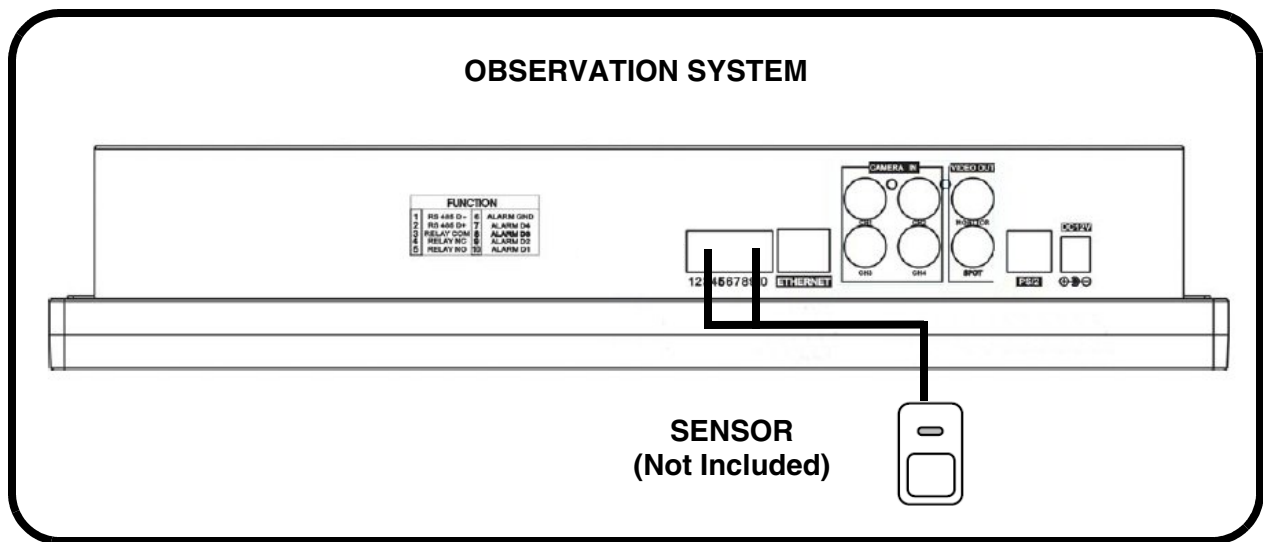
A motion detection or sensor unit can be used to send a signal to the Observation System to begin camera viewing on the matching Video Channel (when enabled in the Menu, see page 39):

- Example: A Window sensor unit has been installed on Alarm Block port #4. When this sensor is activated, the camera on DIN or BNC VIDEO port #4 will become active (if enabled in the MENU on the Observation System)

Installing a Sensor

1. Connect the GROUND Cable to the GND port on the Alarm Block on the Observation System (ports 3, 4, 5 or 6 - see FUNCTION chart below).
2. Connect the SIGNAL Cable to a numbered port (ports 7, 8, 9 or 10 - see FUNCTION chart below).

To start ALARM RECORDING on the System, refer to page 39 for menu configurations.



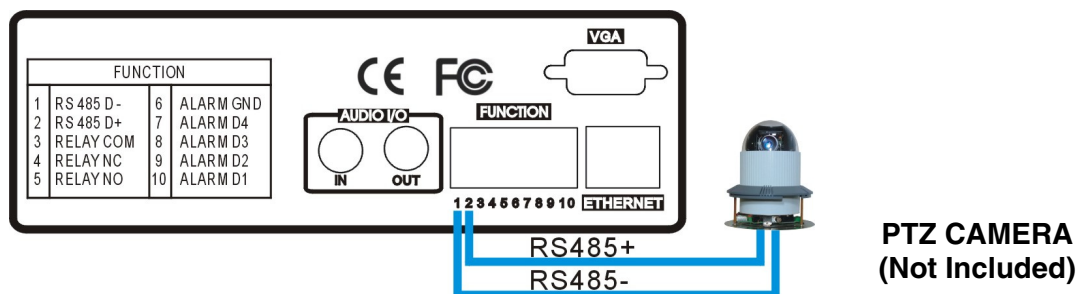
Connecting PTZ Cameras - Appendix #5

PTZ Cameras (not included with this system) can be connected to the PTZ Control Block on the back panel of the System. The PTZ Controls are enabled through the Menu system on the Observation System. Additional PTZ Cameras are available at <http://www.lorexcctv.com>

Installing a PTZ (RS-45 Type) PTZ Camera:

1. Connect the Transmit Cable to the D+ port on the PTZ Control Block on the Observation System.
2. Connect the Receive Cable to the D- port on the PTZ Control Block on the Observation System.
3. Connect the Camera to BNC Channel 1 (DIN Channel 1 must be empty).

Connection Setup

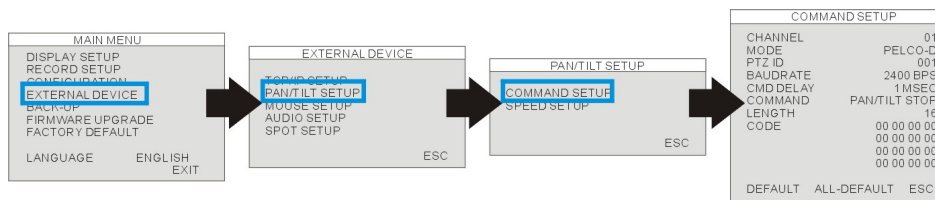


Note: Connect the D+/D- of speed dome camera to the D+/D- of DVR.

PTZ setup

Different baud rate setting may be required for different PTZ camera (speed dome camera). Please refer to speed dome camera user's manual for proper baud rate setup.

[EXTERNAL DEVICE]



SYSTEM MENU -> EXTERNAL DEVICE -> PANTILTSETUP -> COMMAND SETUP

[MODEL]:

Select protocol.

[PTZ ID]:

Enter the device ID.

[BAUDRATE]:

Baudrate setup

[CMD DELAY]:

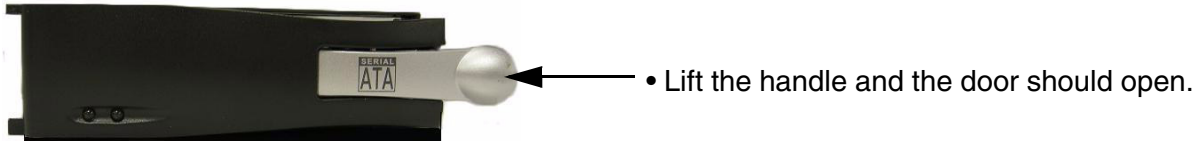
The delay time for next command. Please refer to the PTZ camera user's manual for the suggested value.

SATA Hard Drive Replacement - Appendix #6

The Hard Drive serves the same purpose in an Observation System as a video cassette does in a VCR. Please follow the steps carefully in order to ensure proper installation.

The compartment located on the side panel of the DVR is the removable Cartridge Casing in which you insert the Hard Drive. The various parts of the Cartridge Casing are labeled for your reference.

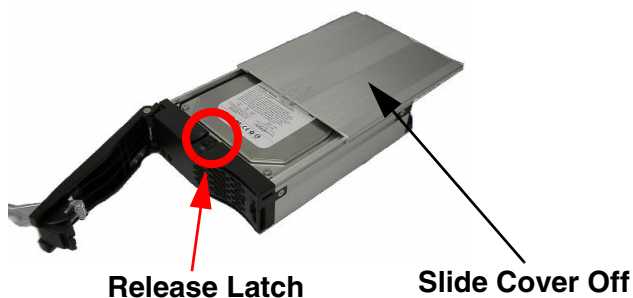
STEP 1: Remove the Cartridge Casing from the DVR.



- If the door does not open you may need to unlock the cabinet. Please refer to Step 7 on how to unlock the cabinet.

STEP 2: Remove the Cover from the Cartridge Casing

- Un-clip the release latch with the word "OPEN" printed beside it by gently pushing on the latch.
- Slide the cover off to where it locks or catches the stopper and lift the Cartridge Casing to remove it.



STEP 3: Slide the SATA Hard Drive into the Cartridge Casing

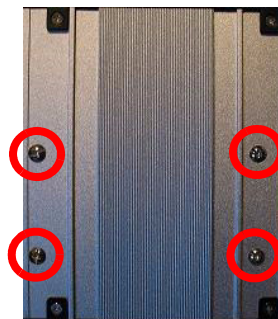
- Slide the SATA HDD into the Cartridge Casing with the SATA HDD connectors facing the rear of the Cartridge Casing.



STEP 4: Secure the Hard Drive in the Casing

This step is vital for the SATA Hard Drive to connect to the DVR.

- Use the 4 provided screws
- Positioning the Hard Drive into place
- Tighten the 4 screws on the bottom of the Casing



Position Hard Drive and secure with provided screws



NOTE: Insure to use the correct screws.

STEP 5: Slide the top Cover over the Cartridge Casing

- Slide the Cover forward over the Cartridge Case. Ensure it is secured in place over the release latch.



Release Latch

STEP 6: Reinsert the Cartridge Casing into the DVR

- Fully insert the Cartridge Case into the DVR.

NOTE: If the Cartridge Casing is not going all the way in, gantly adjust the angle of the cartridge Casing to help line it up to the connectors in the DVR.

Unlocked →



STEP 7: Lock the Cabinet

Lock the cabinet by turning the key clockwise.

Locked →



NOTE:

If you do not lock the cabinet, the system will **NOT DETECT THE HARD DRIVE** and will not function properly. Refer to the Side Panel (Removable Hard Drive Cartridge) on page 12 for lock location.

Optional Accessories

The following accessories are available to add to your existing system:

SLAVE / SPOT OUT MONITOR



Slave / Spot Out Monitors -
View selected Cameras on a
second Monitor

BNC TYPE CAMERAS



Additional BNC Type
Cameras

EXTENSION CABLE



Extends the length
between the CAMERA
and MONITOR.
Available in 60' length.

PTZ CAMERAS



Accessory PTZ Cameras
for additional view control.

PRO SERIES CAMERAS



Additional BNC Type
Cameras

CAMERA ACCESSORIES



Night Vision Accessory
with 68 LED
illuminators for viewing in
total darkness

**TO ORDER THESE ACCESSORY ITEMS OR FOR A COMPLETE LISTING OF AVAILABLE
PRODUCTS, PLEASE VISIT US ON THE WEB AT:**

WWW.LOREXCCTV.COM

It's all on the web



Product Information



Specification Sheets



User Manuals



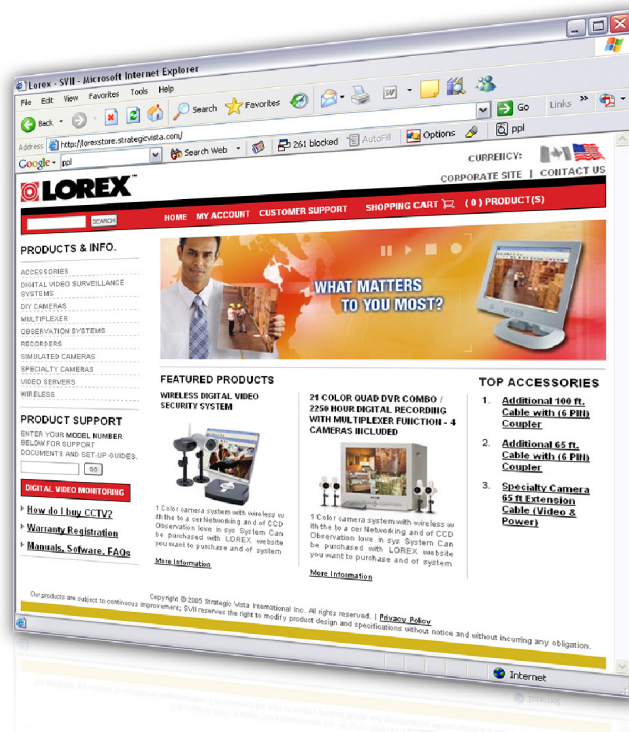
Software Upgrades



Quick Start Guides



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